

Abstract of the Disclosure[STURMAN]ENGINE POWER MODULE AND METHODS OF OPERATION

Herein disclosed is a power module comprising an air compressor chamber, an air supply valve operable to control air flow to the air compressor chamber, a combustion chamber separate from the air compressor chamber, an air storage chamber arranged between the air compressor chamber and the combustion chamber, an actuating fluid common rail, an actuating fluid compressor chamber, an actuating fluid supply valve operable to control actuating fluid flow to the actuating fluid compressor chamber, an actuating fluid storage chamber arranged between the actuating fluid compressor chamber and the actuating fluid common rail, a hydraulically-actuatable intake valve operable to control air flow to the combustion chamber, and a hydraulically-actuatable exhaust valve operable to control exhaust gas flow from the combustion chamber. Among other things, the power module provides significantly more power output than a conventional internal combustion engine of similar size.